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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,622	03/10/2004	Valentin Malinov	VM101	4755
7590 12/23/2004			EXAMINER	
Michael J. Foycik, Jr. 1718 M St. N.W. #255 Washington, DC 20036			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/797,622	MALINOV, VALENTIN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thai-Ba Trieu	3748	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,7 and 9 is/are rejected.
- 7) ☒ Claim(s) 3-5,8,10 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "12" (See Page 9, line 1, and Figure 1) and "50" (See Page 11, line 8, and Figure 1) have both been used to designate **"lubricant pool"**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "6" has been used to designate both **"lifting rods"** (See Page 9, line 6 and Figure 1) and **"port"** (See Page 19, line 2 and Figure 7a). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to

obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “60” has been used to designate both “**valve lift portions**” (See Page 9, line 7) and “**extending curve arms**” (See Page 19, line 6). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is required to submit a substitute Abstract to meet the requirement set forth below.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet **within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length** since the space provided for the

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abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kolbinger (Patent Number 5,127,810).***

**Regarding claims 1-2 and 7, Kolbinger discloses a rotary engine, comprising:**

a spherical combustion chamber (11) having an internal groove (40);

a rotor (12, 30, 35, 37) extending into the spherical combustion chamber (11);

a first baffle (14) having a ridge (39) in engagement with the internal groove (40); and

a second baffle (13) supported by the rotor (12, 30, 35, 37) (See Figures 1-4b, and Column 3, lines 38-53);

wherein the second baffle (13) has a circular face, and the first baffle (14) has a semicircular face (See Figures 1-2).

**Regarding claim 6**, Kolbinger discloses a rotary engine, comprising:

- a spherical combustion chamber (11);
- a rotor (12, 30, 35, 37) extending into the combustion chamber;
- a first baffle (14);
- a second baffle (13);
- guiding means (39, 40) for guiding the first baffle in an oscillatory motion with the combustion chamber (11);
- connecting means (31) for connecting the second baffle to the rotor such that rotation of the rotor causes oscillatory movement of the second baffle (See Figures 1-4b, and Column 3, lines 38-43).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kolbinger (Patent Number 5,127,810), in view of Lim (Patent Number 5,336,067).***

Kolbinger discloses the invention as recited above; however, fails to disclose a cam sleeve.

Lim teaches that it is conventional in the spherical engine art, to utilize a cam sleeve (86) (Sees Figure 1, 5, 8).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the cam sleeve, as taught by Lim, to improve the efficiency of Kolbinger device, since the use thereof would have controlled the rotation of the rotor.

### ***Allowable Subject Matter***

Claims 3-5, 8, and 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Berry (US Patent Number 3,877,850) discloses a spherical power device.
- Berry (US Patent Number 3,816,039) discloses a rotary air pump with rotating and oscillating center piston.
- Miller, Jr. (US Patent Number 3,156,222) discloses a flat head spherical engine.
- Loewen (US Patent Number 2,708,413) discloses a rotary piston power transferer.
- Hamann (US Patent Number 1,150,430) discloses a machine with rotatory and oscillating pistons.
- Hurdle et al. (US Patent Number 389,927) disclose a rotary engine.

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- Lyon (US Patent Number 168,034) discloses a rotary pump.
- Kempthorne (US Patent Number 1,890,612) disclose an engine.
- Derek (Patent Number GB 2 052 639 A) discloses rotary positive displacement fluid machines.
- Cordonnier et al. (Patent Number FR 2 321 584 A) disclose a spherical rotary engine.
- Wolfgang (Patent Number DE 43 25 166 A1) discloses a cardan rotary engine.
- Boewer (Patent Number DE 34 04 172 A1) discloses a rotary engine.
- Nishijo et al. (Patent Number JP 56009691 A) disclose a rotary fluid machine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB  
December 17, 2004



Thai-Ba Trieu  
Patent Examiner  
Art Unit 3748